ABSTRACT OF THE DISCLOSURE

A semiconductor polishing device having a substantially cylindrical roller body made of polyvinyl acetal with a uniform material porosity having a mean flow pore pressure ranging from about 0.30 PSI to about 0.35 PSI with 80% of its pores ranging from 7 to 40 microns in size coated with a low viscosity adhesive composition of an appropriately formulated allphatic or aromatic difunctional polyether urethane methacrylate or formulated multifunctional allphatic urethane acrylate and abrasive particles to form an adhesive skin of about 1 micron in thickness. The abrasive particles typically have a particle size ranging from about 0.05 to about 7 microns and a Mohs' hardness of at least about 7.